

1 2. The apparatus of claim 1, wherein the package comprises; a package including
2 a cavity for receiving the mass.

1 3. The apparatus of claim 1, wherein the package comprises:
2 a package including a recess for receiving the rigid member.

1 4. The apparatus of claim 1, wherein the mass comprises one or more bond pads
2 for coupling the mass to the package.

1 5. The apparatus of claim 4, wherein the bond pads have a cross-sectional shape
2 selected from the group consisting of approximately rectangular, approximately oval,
3 approximately tri-oval, approximately oct-oval, approximately wavy sided rectangular,
4 approximately oct-pie-wedge, approximately hollow oct-pie-wedge, approximately nine-
5 circular, approximately starburst, or approximately sunburst.

1 6. The apparatus of claim 4, wherein the mass comprises one or more passive
2 regions; and
3 wherein the bond pads are approximately located in the passive regions.

1 7. The apparatus of claim 4, wherein the mass further comprises a first passive
2 region; and
3 wherein the bond pads are approximately located in the first passive region.

1 8. The apparatus of claim 7, wherein the first passive region is located at one end
2 of the mass.

1 9. The apparatus of claim 4, wherein the mass further comprises a first passive
2 region and a second passive region; and
3 wherein the bond pads are located in the first passive region and the second
4 passive region.

1 10. The apparatus of claim 9, wherein the first passive region is located at one end
2 of the mass; and
3 wherein the second passive region is located at the opposite end of the mass.

1 11. The apparatus of claim 4, wherein the mass further comprises a first passive
2 region integral to the active region; and
3 wherein the bond pads are located in the first passive region.

1 12. The apparatus of claim 11, wherein the first passive region is located at one end
2 of the mass; and
3 wherein the first active region is located at the opposite end of the mass.

1 13. The apparatus of claim 4, wherein the mass further comprises an active region;
2 and
3 wherein the bond pads are approximately located in the active region.

1 14. The apparatus of claim 13, wherein the bond pads are located in the
2 approximate center of the active region.

1 15. The apparatus of claim 1, wherein the rigid members have a cross-sectional
2 shape that is approximately rectangular or approximately circular.

1 16. The apparatus of claim 1, wherein the rigid members are approximately located
2 at one end of the package.

1 17. The apparatus of claim 1, wherein the rigid members are approximately located
2 at the approximate center of the package.

1 18. The apparatus of claim 1, wherein there are one or more first rigid members and
2 one or more second rigid members;
3 wherein the first rigid members are approximately located at one end of the
4 package; and
5 wherein the second rigid members are approximately located at the opposite
6 end of the package.

1 19. The apparatus of claim 1, wherein the rigid members are a material selected
2 from the group consisting of solder, conductive epoxy, non-conductive epoxy, and glass
3 frit.

1 20. The apparatus of claim 1, further comprising one or more sliding supports
2 coupled to the package for slidingly supporting the mass.

1 21. The apparatus of claim 20, wherein the sliding supports have a cross-sectional
2 shape selected from the group consisting of approximate square, approximate circle,
3 approximate triangle and approximate rectangle.

1 22. The apparatus of claim 1, wherein the package comprises:
2 a package including a pedestal for supporting the rigid members.

1 23. The apparatus of claim 1, wherein the mass is a micro-machined device, an
2 integrated circuit chip, or an optical device.

1 24. The apparatus of claim 1, wherein the rigid members further electrically couple
2 the mass to the package.

1 25. A method of coupling a mass having an active region to a package to reduce
2 effects of thermal stress, comprising:
3 attaching at least one surface point on the mass to the package using one or
4 more substantially rigid members to create a resilient coupling between the
5 mass and the package, wherein at least a portion of the active region is spaced
6 apart from the at least one point of attachment.

1 26. The method of claim 25, wherein attaching the mass comprises attaching the
2 mass at a plurality of locations.

1 27. The method of claim 25, wherein the mass comprises a passive region, and
2 wherein attaching the mass comprises attaching the passive region to the package.

1 28. The method of claim 27, wherein the passive region is located at one end of the
2 mass.

1 29. The method of claim 25, wherein attaching the mass comprises attaching the
2 active region to the package.

1 30. The method of claim 29, wherein attaching the active region comprises attaching
2 the approximate center of the active region to the package.

1 31. The method of claim 25, wherein the mass comprises a first passive region and
2 a second passive region; and
3 wherein attaching the mass comprises attaching the first passive region to the
4 package and attaching the second passive region to the package.

1 32. The method of claim 31, wherein the first passive region is located at one end
2 of the mass; and
3 wherein the second passive region is located at an opposite end of the mass.

1 33. The method of claim 25, wherein the mass further comprises a passive region
2 integral to the active region; and
3 wherein attaching the mass comprises attaching the passive region to the
4 package.

1 34. The method of claim 33, wherein the passive region is at one end of the mass;
2 and
3 wherein the active region is at the opposite end of the mass.

1 35. The method of claim 25, wherein attaching the mass comprises permitting the
2 mass to expand and contract without inducing stresses in the mass.

1 36. The method of claim 25, wherein attaching the mass comprises providing for
2 expansion and contraction of the package without inducing stresses in the mass.

1 37. The method of claim 25, further comprising slidably supporting the mass at one
2 or more different locations.

1 38. The method of claim 37, wherein slidably supporting the mass comprises
2 slidably supporting the mass at a plurality of locations.

1 39. The method of claim 37, wherein slidingly supporting the mass comprises
2 providing for expansion and contraction without inducing stresses in the package.

1 40. The method of claim 25, wherein attaching the mass comprises providing for
2 expansion and contraction without inducing stresses in the package.

1 41. The method of claim 25, further comprising electrically coupling the mass to the
2 package at one or more different locations.

Respectfully submitted,

Date: August 28, 2001


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